

aggregate 105 is placed and positioned in firm contact with each other and the mold sides and mold end and previously formed block rough end 103. Medium or finer aggregate 106 is then placed over and between the coarse aggregate and tubes 104 are positioned within the mold after which mortar 102 is poured into the mold to hold the aggregate and tubes in place.

In the Claims:

Claim 4, line 4, change "said", first occurrence, to - a- -;

Claim 15, line 4, change "said", first occurrence, to - a- -.

REMARKS

The objections and rejections are literally, logically and legally flawed. The Examiner has provided no references, no PTO-892 and only one sheet of drawings (sheet 2 of Guastavino, U.S. 464,562).

Drawings

The drawings have been objected to under 37 CFR 1.83 (a) for not showing the process and every feature claimed.

The drawings are to quickly demonstrate to the "mechanic in the related art" what the invention is. It is believed that the drawings properly depict the elements of the invention and that

the process steps are stated clearly enough that the mechanic in the art can readily understand the structure and step-by-step how to perform the invention. As a practical matter it is believed that the flow chart is quicker and easier to understand than a drawing that requires extensive reading of the specification.

1. The Examiner's requirement that "the entire process for forming construction blocks ... must be shown is tantamount to holding that a large percentage of patents issuing are invalid, since process patents are routinely issued without any drawing being present and many are issued with only a flow chart, such as that shown in Fig. 7.

2. Your applicant provided a chart in Fig. 7 that diagrams the steps for forming an arch.

3. The steps for forming the arch are clearly described in the specification (page 8, line 18-page 9, line 6 and page 14, lines 4-20).

4. The concepts involved are technically not as complicated as rocket science. The invention novelty is to be set forth clearly so as to enable the mechanic in the art to reproduce the invention, the inventor is not to encumber the specification with every detail well known in the related art.

Every patent application relies to some extent on the reader's knowledge of the terms, concepts and constructions it embodies and, therefore, relies to some extent upon knowledge of persons skilled in the art to complement that disclosed in order that it be enabling within the meaning of 35 U.S.C. Section 112; In re Wiggins, 179 USPQ 421 (CCPA 1973); Rengo Co. Ltd. v. Molins Machine Co., Inc., 211 USPQ 303 (3d Cir. 1981); State Industries, inc. v. A. O. Smith Corporation, 221 USPQ 958 (Tenn Dt Ct 1983).

5. In any event, to comply with the Examiner's requirement, a drawing in compliance with the requirement is enclosed under separate cover addressed to the Draftsman as Fig. 10, with a brief explanation of it added in the specification.

No new matter has been added. Support for the drawing and explanation of it is set forth in 2 and 3 above. Further, the specification addresses the ancient art of forming an arch using a supporting structure (page 11, lines 15-17 and page 14, lines 4-5), alternate use of existing molds or manufacture of new ones (page 8, lines 18-19), and use of both large and small aggregate materials (Figs. 4 and 9; page 13, lines 1-2; and original claims 12-19), and the selection and placement of aggregates and the blocks formed by them (page 9, lines 7-10; page 10, lines 1-3; page 12, lines 7-9; page 13, lines 3-7 and 11-15; and page 14, lines 1-3). These provide more than an adequate support in the original application for Fig. 10 and the explanation of it.

It is noted that the Examiner's reference, Guastavino, addressed arch formation in 1891.

#### 35 USC 112 Rejection of Claims 4 and 15

Claims 4 and 5 have been rejected under 35 USC 112 as being indefinite for lacking proper antecedents.

The conclusion by the Examiner that “said space” had no proper antecedent is not agreed with since the prior line stated: “ ... their extrados ends spaced from each other.” It is believed that “a” is adequate but that “the” would be more appropriate. In any event the Examiner’s requirement is reluctantly accepted.

### 35 USC 102(b) Rejection

Claims 13, 16 and 17 have been rejected under 35 USC 102(b) as being anticipated by Sandorff.

To reject a claim under 35 USC 102(b) requires that all of the same elements be found in exactly the same situation and united in the same way to perform the identical function in a single prior art reference. If the prior art reference does not do this there is no anticipation. Scott v. Inflatable Systems Inc, 222 USPQ 460 (CA 9<sup>th</sup> Cir 1983; Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co. et al., 221 USPQ 481 (CAFC 1984).

Claim 13, the base claim for claims 16 and 17, requires, among other things:

“placing aggregate pieces within said mold;  
positioning said aggregate pieces within said mold so that said aggregate pieces are in firm contact with said mold sides and in firm contact with each other throughout said mold;  
pouring mortar over said positioned aggregate pieces so as to maintain their position;”

A. Sandorff does not teach positioning aggregate pieces within a mold so that they are in firm contact with the mold sides.

B. Sandorff does not teach positioning aggregate pieces within a mold so that they are in firm contact with each other.

C. Sandorff does not teach mortar used to hold aggregate pieces in firm contact with one another.

D. The Examiner acknowledges, by his own admission, that Sandorff does not teach having the blocks in contact with each other. On page 6 of the Office Action mailed 06/07/2002, the Examiner states Sandorff discloses the claimed invention (claims 14 and 15) “except for the steps of placing a plurality of blocks in a side by side contacting relationship.” (Emphasis added.)

As shown in Figs 3 and 8 and stated in column 6 lines 35-50; the stones are deliberately separated and maintained separated by sand or sand and concrete. Because of this the patent to Sandorff does not anticipate the claims, he in fact teaches the opposite structure and steps from those being claimed.

Claim 16 is drawn to a process for forming an “arch.” Sandorff is drawn to formation of rock-like structures for vertical aesthetic walls. An arch is drawn to structures for supporting vertical forces. To state that the “arch” structures claimed are “inherent” in Sandorff is to ignore the diverse purposes, structures, and limitations taught by Sandorff and those being claimed.

Examiner’s opinions are not a valid substitution for teachings within the art. The claim is not anticipated by or shown to be obvious in view of Sandorff. The Examiner’s interpretation of

Sandorff is so distorted that it amounts to a personal opinion rather than teaching of the prior art. The patent to Sandorff would not support a 35 USC 103 obviousness rejection. The ultimate legal conclusion of obviousness must be based on facts or records, not on the examiner's unsupported allegation that a particular structural modification is "well known and thus obvious." Subjective opinions are of little weight against contrary evidence. In re Wagner et al, 157 USPQ 552 (CCPA 1967).

Claim 17 is drawn to a process including the step of placing a tube within the mold to provide a conduit for a prestress means. Sandorff does not teach the use of a "tube" for insertion of a prestress means. The teaching of Sandorff is that reinforcing rods can be used within the mold. The teaching that a plugged PVC pipe can be placed over the end of the restraining rod during casting does not anticipate the structure or the steps or the function claimed.

Claims 13, 16 and 17 are not anticipated by Sandorff.

#### 103 Rejection of Claims 1-12, 18 and 19

Claims 1-12, 18 and 19 have been rejected under 35 USC 103 as being unpatentable over Guastavino in view Sandorff.

Guastavino (U.S. 464,562) does construct an arch and is the only reference cited that does. His arch is an improvement over the old construction shown in Fig. 4 where a wooden form 8 is used to support the common brick materials during construction, after which it is

because of its numerous joints (page 2, lines 18-45). The structure is made of flanged brick tile (Fig. 6) with common brick (Fig. 5) placed end to end over the tile (Fig. 3) that is an improvement over the prior art (Fig. 4) where a temporary support 8 is used having an unidentified intermediate with common bricks 7 placed side by side on the intermediate (page 2, lines 18-45). There is no aggregate within common brick in Guastavino or elsewhere whether in the shape of the common brick (Fig. 5) or the flanged tile (Fig. 6). The construction block 6 of Guastavino is not in the shape of a parallelepiped (Fig.1), although the permanent solid center of tiles can support and be covered with parallelepiped tiles 11 or common bricks 7 as shown in Figs 2 and 3. The invention is to the formation of a tile arch (Fig.1) using a plaster 9 between their upper half joints and cement between their lower half joints over a small wooden frame in the desired curved shape (page 2, lines 46-73). The wooden arch is not shown, apparently because it was old and well known prior to 1891. The base of the tiles “a” are not in contact with one another, they have cement 10 in between them (page 2, lines 54-61). In Fig. 2 the arch is completed by placing common tile 11 over the joints of the tile “a” and laying concrete 12 over the tile. In Fig. 3 the arch is completed by a layer of common bricks 7 over the tile (page 2, lines 90-103).

The Examiner has stated that the bricks 7 (construction blocks) are placed side by side adjacent to one another (Figs. 3, 5, 7) and that “the parallelepiped blocks placed in the form of an arch have their intrados ends abutting each other and their extrados ends spaced from each other (see attached figures 3 and 4).” Even though the Examiner has required your applicant to show details of his structure for clarity, it appears that the clear showing of Guastavino is not only ignored, it is being converted or changed to structures that are clearly not present or intended to

be present. It is perfectly clear from the patent drawings in Figs. 2 and 3 of Guastavino that the same spacing between the tops of the tiles 11 and bricks 7 exists at the bottoms. There is no teaching that the structure is anything other than this. The prior art representation Fig. 4, if anything more than a representation, clearly shows the same spacing at the top and bottom, if there is any spacing at all it appears to be filled with concrete. Patents are references only for what they clearly disclose or suggest. It is not proper use of a reference to modify its structure to one which prior art references do not teach. In re Randal et al, 165 USPQ 586 (CCPA 1979).

If the drawings are to be relied on to show claimed structure, that structure must in fact be shown. The broad recitation (page 2, lines 17-26) of laying bricks on the edges and supporting the work while the cement is drying and setting, yields no specific structure, and from the totality of the disclosure the bricks are cemented together essentially uniformly along their entire vertical extent (noting again the drawing Fig. 4 and the fact that the structures will collapse if the cement is not properly set). If the base of the bricks were in contact with each other and concrete only between their upper ends, the cure of the concrete would not be critical as disclosed and contrary to the Examiner's erroneous creative speculation (note page 2, lines 108-122 with particular attention called to lines 119-122). Neither the drawings nor the disclosure of them justifies the conclusion that the bricks lower ends abut with concrete between the spaced upper ends. As understood, the Examiner's "except...." portion of the claims 1-12, 18-19 rejection (page 4) is an acknowledgment of the deficiencies of Guastavino. The mere allegation that the differences between the claimed subject matter and the prior art are obvious does not create a presumption of unpatentability which forces an applicant to prove conclusively that the Patent Office is wrong. In



presumption of unpatentability which forces an applicant to prove conclusively that the Patent Office is wrong. In re Soli, 137 USPQ 797 (CCPA 1963).

The patent to Sandorff (U.S. 5,624,615) is cited to disclose the deficiencies in Guastavino. First, Sandorff is drawn to a non-analogous art. The formation of a strong arch and formation of a decorative stone panel are entirely different in concept, structure and function. One wants strength for primarily vertical pressures and forces, the other wants horizontally viewed aesthetics with only limited horizontal pressure resistance. The Examiner's interpretation of the Sandorff patent is nothing short of a perversion and misrepresentation. Sandorff does teach aggregate pieces 35 within a block 30. There is a serious question as to whether the aggregate pieces are adjacent to the lower surface. As disclosed they are not. While the aggregate pieces are adjacent the lower portion of the mold bottom panel 72, that aggregate forms the vertical facing of the panel (Fig. 4) and is not a lower component of the block in an arch or any other structure; and the panel is deliberately kept free from "aggregate" at its lower end (Fig 4, column 8, lines 18-25). This belies both the structure and function the Sandorff patent is cited for. The Examiner states that the Sandorff "aggregate pieces are in direct contact with one another (column 6, lines 35-37, by 120-figure 4)." This is blatantly false. It is in conflict with the whole concept and intent of that patent. The whole purpose of that patent is to design a panel that has the appearance of stones held together and spaced with concrete. All the drawings that demonstrate the positioning of the aggregate clearly show this (Figs 3, 8, 13a, b and c) and it can also be seen in Figs. 1, 4, 5, 11a and 11b. The wording of column 6, lines 35-37, is clear and unambiguous but has been taken completely out of context in conflict with the entire gist of the paragraph it is a part of. "In Fig. 1,

this process is repeated to pack the stones against each of the peripheral walls 22 of mold 20 and against one another proceeding from the corners or sides of the mold.” What process is repeated? The preceding sentence lets the mechanic know the process that is to be repeated (column 6, lines 31-34). “The user then proceeds in the same manner to pack sand for the next stone as shown in Fig. 2 moving the stone laterally along the mold bottom to pack a quantity of sand against and under the curve of the adjacent stones (emphasis added). Fig. 3 clearly shows this result and lines 49 and 50 state: “After stones 35 are set, concrete 50 is poured over stones 35 and the sand 44 between them.” There is clearly no justification for the Examiner’s interpretation of the Sandorff teachings. A modification of the prior art references which is not taught by the references cannot be relied on under 35 USC 102 or 103. Deering Milliken Research Corp. v. Beaunit Corp., 182 USPQ 421 (D.C.W.D.N.C. 1974); In re Hummer 133 USPQ 586 (CCPA 1970).

It appears that the structure of Sandorff, used as an arch, would be even weaker than Guastavino states the multi-joint arch to be (page 2, lines 18-45).

Even if the basic concept of placing stones side by side to form an aesthetic vertical wall was old, the rigid placement of stones in contact with each other to form an earthquake resistant structure as claimed is patentable over such an isolated basic teaching alone. The prior art must address and provide the inventor’s answer to the particular problem confronting the inventor. In re Winslow, 151 USPQ 48 (CCPA 1966).

The best that can be said for the statement of abutting stones, inappropriately taken completely out of context, is that it is an accidental statement or disclosure. Such an accidental statement does not enjoy the status of a prior art reference.

The reliance on joints 120 of Fig. 4 is totally misplaced insofar as abutting aggregate within a block is concerned. First, 120 relates to abutting panels and refers to a vertical joint between precast panels, not aggregate within a panel. Second, the panels are constructed so as to avoid having aggregate abut each other when the panels are set side by side and the panels “are equally spaced from one another” (column 8, line 67 - column 9, line 2). Third, great efforts are made to conceal the fact that vertical joints 120 are present, including staggering endmost stones to avoid having them at the same height (column 9, lines 8-22). Fourth, in the rejection of claims 14 and 15, the Examiner states that Sandorff discloses the invention (of claims 14 and 15) with the exception of “placing a plurality of blocks in a side by side contacting relationship.”

Your applicant finds no block “tetrahedron” teaching within the definition of stone in column 5, lines 49-52 or dimensions for the finished panels in column 5, lines 52-58; or that the stones 35 are coarse and fine; or that low quality slag, crushed stone, concrete chips and Sirasu are included by Sandorff within his definition of stones to be used. The structure was not left to the imagination of the mechanic. On page 9, lines 1-3, the terms used are specifically set forth. “The stones and aggregate generally range from 50 to 60 cm in circumference for large, to about 20 to 40 cm for medium, and about 5 to 10 cm for small pieces. It is to be noted that on page 9 of the Specification, line 3 defines small aggregate to be 5 to 10 cm in circumference. Although

sand is acknowledged to be fine, a material that has a 5 cm circumference can hardly be classified as sand.

Sanderoff teaches stones 35 that can be “field stone, blue stone, granite, flag stone and the like” and that the dimensions of the mold 20 and stones 35 can be varied (column 5, lines 49-54) or can be natural or man made (column 5, lines 59-63). How this can be interpreted as low quality slag, crushed stone, concrete chips, and Sirasu is not quite clear, but such per se is irrelevant. These listed stones could be used, they include the expensive materials found to be unnecessary. That the aggregate pieces are held in contact with each other by mortar (column 6, lines 49-52) is relevant, since it is clear that the stones or aggregate 35 are not to be in direct contact with one another. The “mortar” is described as “concrete” that is “an aggregate of particles (e.g. small stones and sand) cement and water” poured over the stones and sand between the stones that spaces the stones (column 6, lines 49-63).

It is difficult to understand the Examiner’s conclusion that the structural differences would be an obvious matter of design choice to vary the mold and stones and to select materials based on suitability for the intended use, “and since the applicant has not disclosed that this other shape or materials is critical or solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the shape of the block and materials used within the references cited. (Emphasis added.)

This statement is “mind boggling” in view of the fact the title of the invention is “MANUFACTURE AND USE OF EARTHQUAKE RESISTANT CONSTRUCTION BLOCKS” and the fact that every one of claims 1-12 states “An earthquake resistant structure” and the fact that earthquakes are discussed on page 6, lines 15-17, and page 9, lines 12-15, and sentences sharing pages 10 and 11, and page 11, lines 10 and 11, and page 12, lines 3-9, and page 16, lines 15-17, and paragraph sharing pages 16 and 17. It is to noted that the term “earthquake resistant” has not been found in any one of the applied references. A reference which is not directed to the same purpose and does not have the same inventive concept as claims under consideration cannot be fairly applied in rejecting such claims. In re Luvisi and Nohejl, 144 USPQ 646 (CCPA 1965).

#### 35 USC 103 Rejection of Claims 14 and 15

Claims 14 and 15 have been rejected under 35 USC 103(a) as being unpatentable over Sandorff in view of Whitehouse et al (U.S. Patent No. 3,616,108).

The patent to Whitehouse is drawn to making self-sealing refractory ceramic construction units with kiln blocks held together by a resilient, compressible elastomeric composition for high temperature use in furnaces, kilns, ladles and similar equipment (Abstract).

Whitehouse does not teach the construction of an arch, he teaches a wall in the shape of an arc or rotary kiln. Whitehouse is not concerned with vertical pressures or earthquake resistance, he is concerned with high temperature resistance. Whitehouse is not concerned with

stabilizing blocks in contact with one another, he is concerned with an elastic bond between blocks. When parallelepiped blocks 42 are laid in an arc, wedge shaped compressible elastomeric elements 52 extend the entire width of the blocks. In short, the patent to Whitehouse, like that to Sandorff, is to a non-analogous art, is irrelevant to the structure and steps claimed and teaches directly opposite to those of the present invention.

While there is some overlap between the definitions of arc and arch, the intent of the references cited in this application against the claims is clear. The structure of Guastavino is an arch for supporting weights moving over it. The structure of Whitehouse can be in an arc (Fig. 4). The "compressible elastomeric elements" shown in Fig. 4 have an outer metal lining or a shell to hold the kiln blocks in place with elastomeric elements between the blocks. The structure is that of a vertical wall for high temperature kilns, etc. The patent to Sandorff has no known curved structures, no teaching of forming an arc or arch, and no teaching of direct frictional contact between aggregates. Neither Whitehouse or Sandorff teach the analogous concept or structure or steps being claimed.

Since only one page of drawings (Sheet 2 of R. Guastavino) was provided and since no other reference was provided and since the box "i)" under attachments on form PTO-326 was not checked, it is assumed that this one drawing sheet is the only reference intended to be provided to your applicant.

The last sentence of the rejection (Page 6) states in part that it would be obvious “to provide the method steps of Whitehouse with the steps of Yoshida in order to provide a structure of the blocks as disclosed.” Since there is, as understood, no reference of record to a “Yoshida”, the rejection of claims 14 and 15 is confusing but believed to be an inadvertent mistaken citation. It is assumed that the referral to “Yoshida” was intended to be - -Sandorff.- - .

The references cited against the claims are all but totally irrelevant. The references combined to reject the claims violate the well established rules for determining patentability. A combination rejection must be supported by something other than applicant’s own disclosure. In re Shaffer, 108 USPQ 326 (CCPA 1956). None of the references teach the basic concept of earthquake resistance by packing aggregate tightly together. To imbue one of ordinary skill in the art with knowledge of the invention, when no prior art reference or references of record suggest that knowledge, is hindsight where that which only the inventor taught is used against its teacher. W. L. Gore & Associates v. Gorlock, Inc., 220 USPQ 303 (CAFC 1983). See also Ex Parte Fleischmann, 157 USPQ 155 (BdApp 1967) and In re Harry Sponnoble, 160 USPQ 237 (CCPA 1969). Where nothing in the prior art suggests to one of ordinary skill in the art the desirability of combining the features shown in the different references, the claims should be held to be allowable. In re Osweiler, 145 USPQ 691 (CCPA 1965). None of the references teach the basic concept for solving the instant problem. Where neither reference is directed to the problem solved by an applicant and only applicant’s specification suggests any reason for combining teachings of prior art, it is improper to select statements from the references and combine them

with other references to arrive at applicant's claimed combination. In re Pye and Peterson, 148 USPQ 426 (CCPA 1966).

## SUMMARY

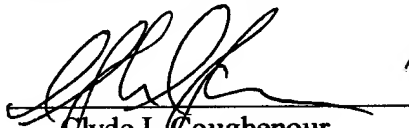
The references cited do not disclose or suggest the claimed structure and steps and the rejections conflict with accepted patentability criteria. Patents are references only for what they clearly disclose or suggest. It is not proper use of a reference to modify its structure to one which prior art references do not teach. In re Randal et al, 165 USPQ 586 (CCPA 1979). The references cited are not capable of functioning and achieving what is achieved by the present claims. Not one of the references address earthquake resistance. A rejection cannot be sustained when the prior art is incapable of functioning as required by the claims and achieving what is achieved by the invention. When this situation exists the Examiner has failed to make out a prima facie case. Ex parte Gould, 231 USPQ 943 (Bd App 1986). The references cited teach away from the structure and steps being claimed, they teach separating the aggregates. The totality of the prior art leads away from the claimed invention and thus cannot be used to render the claims obvious. In re Hedges et al, 228 USPQ 685 (CAFC 1986).



## CONCLUSION

The claims are now believed to be definite and to be adequately supported by the specification and drawings. The claims are believed to define patentable subject matter and to be in condition for allowance and such action is earnestly solicited.

Respectfully submitted



Clyde I. Coughenour  
Reg. No. 33,083

Clyde I. Coughenour  
16607 Sutton Place  
Woodbridge, VA 22191-4627  
(703) 221-8677

Submitted herewith:

Letter to the Draftsman with new Fig. 10